Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) A method of performing optimum power control in respect of [[an]] a dye layer based optical storage device (10) prior to writing data thereto, the method comprising performing an optimum power control process by:

a. performing a test write on a ~~relatively small~~ segment (12) of said dye layer based optical storage device (10); and

b. reading back the test pattern written to said dye layer based optical storage device (10) during performance of said test write;

in respect of a plurality of linear velocities of rotation of said dye layer based optical storage device (10), so as to obtain a function mapping write speed to power, steps (a) and (b) being performed on substantially the same ~~relatively small~~ segment (12) of said dye layer based optical storage device (10) for each of said plurality of linear velocities of rotation.

2. (Currently Amended) A method according to claim 1, wherein the ~~relatively small~~ segment comprises the outermost radius (12) of the optical storage device (10).

3. (Currently Amended) A method according to claim 1, wherein an optimum power control process is performed at both the innermost (14) and the outermost radii (12) of the dye layer based optical storage device.

4. (Original) A method according to claim 3, wherein said optimum power control process is performed at the write speed associated with the innermost radius.

5. (Currently Amended) A method according to claim 1, wherein a power factor is generated using the results of an optimum power control process performed at a plurality of

different write speeds on said outermost radius (12) of the dye layer based optical storage device (10).

6. (Previously Presented) A method according to claim 1, wherein the optical storage device (10) comprises a zoned constant linear velocity (ZCLV) disc or a constant angular velocity (CAV) disc.

7. (Currently Amended) Apparatus for performing optimum power control in respect of [[an]] a dye layer based optical storage device prior to writing data thereto, the apparatus comprising:

means for performing a test write on the innermost (14) radius of said optical storage device (10) , prior to writing data to said dye layer based optical storage device (10);

means for reading back the test pattern written to said dye layer based optical storage device (10) during performance of said test write;

means for performing a test write on the outermost (12) radius of said optical storage device (10) , prior to writing data to said dye layer based optical storage device (10);

means for reading back the test patterns written to said optical storage device (10) during performance of said test writes;

means for performing a plurality of test writes on the segment of the outermost (12) radius of said optical storage device (10) at a corresponding plurality of linear velocities of rotation to obtain an optimal power for each of said plurality of linear velocities;

means for reading back the test patterns written to said optical storage device (10) during performance of said plurality of test writes at said segment of the outermost (12) radius;

means for determining a media variation power factor;

means for determining a speed power factor; and

means for obtaining a function that maps writing power level to speed based on the derived media variation power factor and the speed power factor

~~means for performing an optimum power control process by performing a test write on a relatively small segment of said optical storage device and reading back the test pattern written to said optical storage device during performance of said test write in respect of a~~

~~plurality of linear velocities of rotation of said optical storage device, so as to obtain a function mapping write speed to power, the test write in respect of each of said plurality of linear velocities or rotation being performed on substantially the same relatively small segment of said optical storage device~~.

8. (Previously Presented) A method of writing data to an optical storage device (10) including the method according to claim 1.

9. (Original) Apparatus for writing data to an optical storage device (10) including the apparatus for performing optimum power control according to claim 7.

10. (New) A method according to claim 1, wherein the function is a linear regression function .

11. (New) A method of performing optimum power control in respect of an optical storage device (10) prior to writing data thereto, the method comprising performing an optimum power control process by:

a. performing a test write on the innermost (14) radius of said optical storage device (10);

b. reading back the test pattern written to said optical storage device (10) during performance of said test write;

c. performing a test write on the outermost (12) radius of said optical storage device (10);

d. reading back the test pattern written to said optical storage device (10) during performance of said test write on the segment of the outermost (12) radius of said optical storage device (10);

e. performing steps (c) – (d) on the optical storage device (10) for a plurality of linear velocities of rotation to obtain an optimal power for each of said plurality of linear velocities;

f. determining a media variation power factor based on steps (a) – (e);

g. determining a speed power factor based on steps (c) – (e); and

h. obtaining a function that maps writing power level to speed based on the derived media variation power factor and the speed power factor.

12. (New) A method according to claim 1, wherein the function is a linear regression function .